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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,341	12/08/2003	Richard M. Ead	82999	1770

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NEWPORT, RI 02841

EXAMINER

OLSON, LARS A

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,341

Applicant(s)

EAD ET AL.

Examiner

Lars A. Olson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (US 5,119,751) in view of Loughnan (US 2,404,266).

Wood discloses an apparatus for deploying and recovering a towed line array from a submersible vehicle, as shown in Figures 1-3, that is comprised of a cylindrical drum, defined as Part #26, that is located inside said vehicle, as shown in Figure 1, upon which to spool a towed line array, defined as Part #28, an electric motor, defined as Part #60, that is capable of rotating said cylindrical drum, a means for guiding and retaining, defined as Part #70, said towed line array in a slidable manner as said towed line array is wound onto said cylindrical drum, said means being driven by an electric motor, defined as Part #74, and a tube, as shown in Figure 2, that is external to said vehicle through which said towed line array is guided.

Wood, as set forth above, discloses all of the features claimed except for the use of a reverse thruster that is joined to an end of said towed line array, said reverse thruster being capable of propelling itself away from said vehicle.

Loughnan discloses an apparatus for deploying a cable from a vessel, as shown in Figures 1-3, that is comprised of a cylindrical drum, defined as Part #6 or 7, that is located on said vessel upon which to spool a cable, defined as Part #8 or 9, a motor, as shown in Figure 1, that is capable of rotating said cylindrical drum, and a reverse thruster, defined as Part #10 or 11, that is joined at one end of said cable, said reverse thruster being capable of propelling itself away from said vessel, as shown in Figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a reverse thruster in combination with a towed cable, as taught by Loughnan, in combination with the apparatus as disclosed by Wood for the purpose of providing an apparatus for deploying and recovering a towed line array from a vehicle with a means for improving the directional control of a towed line array during deployment, and increasing the deployment speed of said towed line array.

Allowable Subject Matter

3. Claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bouyoucos (US 6,606,958) discloses a towed array system.

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Gorlov (US 6,253,700) discloses a towed power generator with a helical turbine.

Lombardi (US 3,961,589) discloses a cable antenna reeling system.

5. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (571) 272-6685.

lo

December 11, 2006

LARS A. OLSON
PRIMARY EXAMINER

Lars Olson
12/11/06